

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Fields, Brian

Serial No.: 09/857,145

Group Art Unit: 3727

Filed: May 31, 2001

Examiner: Mai, Tri M.

For: SMALL DIAMETER CAN END WITH LARGE OPENING

Assistant Commissioner for Patents
Washington, D.C. 20231RECEIVED
MAY 24 2004

DECLARATION OF MR. BRIAN FIELDS TECHNOLOGY CENTER 3700

I, Mr. Brian Fields, make the following declaration:

1. I, Brian Fields, am the inventor of the subject matter disclosed and claimed in United States Patent Application No. 09/857,145 ("Patent Application"). I understand that the pending claims of the Patent Application have been rejected by the patent office based on a combination of references.
2. I am employed by Crown Technologies Corporation, where my present capacity is End Development Manager. I have a bachelors degree in Mechanical Engineering from Loughborough University, U.K., and have been involved in engineering and development in the field of metal containers for 23 years.
3. I performed the testing reflected in the graph included in the as-filed application and the graph included in the prior response submitted to the patent office on December 9, 2002 as Exhibit 1.

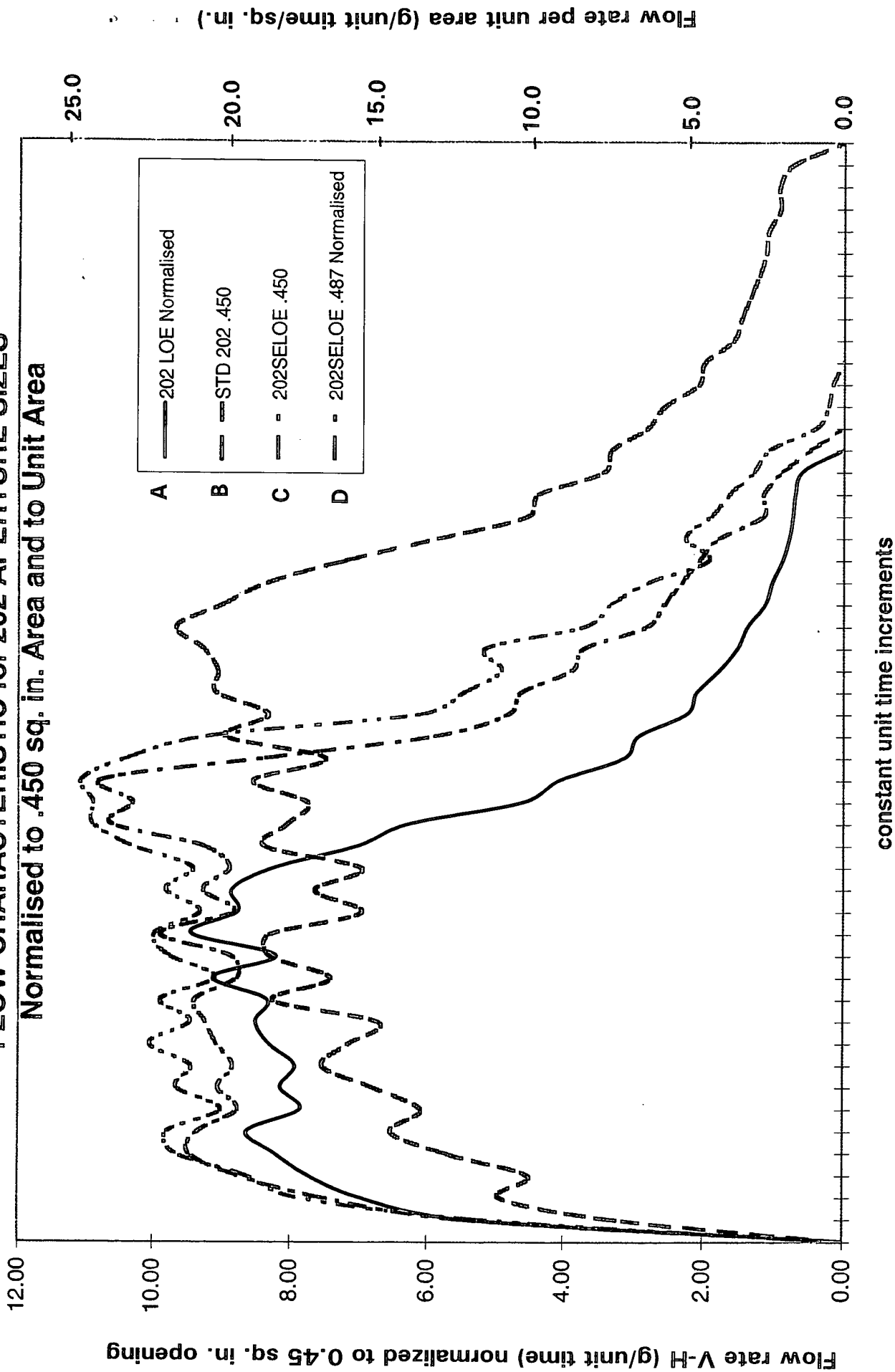
4. I prepared the enclosed plots by dividing the flow rate data of Exhibit 1 (of the December 9, 2002 response) by the ratio of the opening area of the base end (that is, 0.450 sq. in.) to the opening area of the particular end to produce data that is normalized by area. For example, each of the y-axis magnitudes (using the scale on the left side of the graph) for the end of Plot D having an opening area of 0.487 sq. in. is multiplied 0.924 (that is, $0.450/0.487$). The scale on the right side of the graph shows the data of Exhibit 1 divided by the opening area of the particular end to produce y-axis magnitudes of flow rate per unit area. For example, each of the y-axis magnitudes (using the scale on the right side of the graph) for the end of plot D having an opening area of 0.487 sq. in. is divided by 0.487 sq. in.
5. The shape of the plots of normalized flow rate on the y-axis versus unit time on the x-axis, ignoring dimensions, generally represents flow rate per unit area versus unit time.
6. Flow characteristics upon initially rotating a container (as described on page 2, line 22, et seq., of the as-filed application) are important parameters in evaluating end performance. I believe the first peak of a graph of flow rate versus unit time is an important parameter that reflects inrush characteristics. The normalized first peak, as described above, represents the inrush characteristic per unit area, and is an important parameter in evaluating end performance.
7. The normalized graph shows the magnitudes of the first peaks in flow rate per unit area of the inventive openings C and D are significantly greater than those of conventional ends A & B. The greater magnitudes of the first peak of flow rate per unit area of the inventive ends represent unexpected results.
8. All statements of my own knowledge are true and correct, or are based on information that I believe to be true and correct. I acknowledge that willful false statements and the like are punishable by fine or imprisonment, or both, and may jeopardize the validity of the application or any patent issuing thereon.

Executed on 18th MAY 2004

Brian Fields

Brian Fields

FLOW CHARACTERISTIC for 202 APERTURE SIZES



Graph 1

FLOW CHARACTERISTIC for 202 APERTURE SIZES

